

**DEVAL L. PATRICK** GOVERNOR TIMOTHY P. MURRAY LIEUTENANT GOVERNOR JUDYANN BIGBY, MD SECRETARY

JOHN AUERBACH COMMISSIONER

The Commonwealth of Massachusetts Executive Office of Health and Human Services

Department of Public Health William A. Hinton State Laboratory Institute 305 South Street, Jamaica Plain, MA 02130

07/15/2011

Katherine Powell Assistant District Attorney, Suffolk County

Dear ADA Powell,

Enclosed is the information you requested in regards to Commonwealth vs. Included are copies of the following:

- 1. Curriculum Vitae for Annie Dookhan and Peter Piro
- 2. Drug Analysis Laboratory Receipt.
- 3. Control Cards with analytical results for samples #
- 4. Analysis sheets with custodial chemist's hand notations and test results.
- 5. GC/Mass Spectral analytical data for samples #

Annie Dookhan was the custodial chemist and performed the preliminary testing and net weight for this sample. Peter Piro was the confirmatory chemist and analyzed the GC/MS data for this sample.

If you have any questions about these materials, please call me at the number below.

Annie Dookhan

Chemist II

Sincerely

Drug Analysis Lab

Jamaica Plain, MA. 02130

(617) 983-6631

### Curriculum Vitae

### Annie Khan (Dookhan)

#### Education:

University of Massachusetts, Boston, Ma, Master of Science in Chemistry.
University of Massachusetts, Boston, Ma, Bachelor of Science in Biochemistry.

### Experience:

2003 - present

Chemist I, II, Massachusetts Department of Public Health, Drug Analysis Laboratory

- \*Completed six-week training course conducted by senior staff within the Department of Public Health, Drug Analysis Laboratory.
- \*Appointed Assistant Analyst by Assistant Commissioner of Public Health, 2004.
- \*Responsible for the identification of illicit drugs to determine violations of harmful and narcotic drug laws.
- \*Trained in the use of complex analytical instrumentation, microscopes and balances for the purpose of drug analysis.
- \*Maintenance and repairs of all analytical instruments.
- \*Responsible for the Quality Control of all analytical instruments, reagents and controls/standards.
- \* Responsible for the Quality Control/Quality Assurance program for the drug lab.
- \*Notary Public.
- \*Qualified as an expert witness in Massachusetts Courts and U.S. District Court

#### 2001 - 2003

QC Analyst I, II, UMMS-Massachusetts Biologic Laboratory, QC Material Control

- \*Completed proficiency training conducted by a member of the staff within the MLB Quality Control and Quality Assurance Department.
- \*Method Development for creating new techniques and enhancing vaccines for the QC Dept. and FDA.
- \*Writing, revising and reviewing Standard Operating Procedures (SOPs).
- \*Trained and supervised new chemists and interns for the department.
- \*Routine QC testing of products for the FDA.
- \*Trained in the use of complex analytical instrumentation, and balances for the purpose of QC analysis for product and validation projects.
- \*Calibration, preventive maintenance, QC and QA of analytical instrumentation.
- \*Complete testing of chemicals for Vendor Validation Project for the FDA.
- \*Compendial testing and interpretation of the USP, ACS, FCC, AOAC, Merck Index, PDR, etc.

#### Additional Training:

Dept. of Justice - Forensics Professionals. (numerous trainings)

GLP/GMP course with Massachusetts Biologic Laboratory.

QC/QA training according to FDA Codes and Regulations.

GC and GC/MS courses with Agilent Technologies and Restek.

HPLC course with Waters Cooperation.

FTIR course with Spectros.

TOC training with MBL and Sievers.

### Association:

American Chemical Society (ACS)

Northeastern Association of Forensics Science (NEAFS)

### Curriculum Vitae

Peter Piro

### **EDUCATION**

Boston Unversity

B.A. in Chemistry and Minor in Biology, 1989

### HONORS

Magna Cum Laude, 3.6 GPA Graduated with Distinction in Chemistry Valedictorian of the Chemistry Department

### EXPERIENCE

Department of Public Health/State Laboratory Institute

Chemist III, II, I/ Assistant Analyst

December 1991-Present
Supervise the operation and maintenance of the Gas Chromatography/Mass
Spectrometry Laboratory. Analyze controlled substances for State and Federal law
enforcement agencies. Qualified as an expert witness in Massachusetts courts and
U.S. District Court.

## Massachusetts Health Research Institute

Laboratory Technician

September 1990-December 1991

Researched the seasonal and special occurrences of DSP and PSP in shellfish samples harvested from coastal waters and Georges Bank.

## TRAINING AND ORGANIZATIONS

- \* Completed a six-week training course by senior staff within the Department of Public Health Drug Analysis laboratory.
- \* Appointed Assistant Analyst by the Assistant Commissioner of Public Health in February 1991.
- \* Elected as a Regular Member to the Northeastern Association of Forensic Chemists on October 27<sup>th</sup> 1995.
- \* Completed training in Mass Spectrometry given by the Food and Drug Administration/Forensic Chemistry Center on November 2002.
- \* Completed training in Mass Spectrometry Troubleshooting and Maintenance, October 25<sup>th</sup> 2002, at Agilent Technologies.
- \* Notary Public since 1993.



CC #		
воок	# 67	
PAGE #	# 52	

DRUG RECEIPT	PAGE # 52					
District/Unit D-4 D C U	DESTRUCTION #					
Name & Rank of Arresting Officer S9+ Det.	Keenan	ID#10 €	552			
DEFENDANT'S NAME	ADDRESS	CITY	STATE			
		Weymouth	MA			
		Boston	MA			
-		LAB US	SE ONLY			
DESCRIPTION OF ITEMS SUBMITTED	GROSS QUANTITY	GROSS WEIGHT	ANALYSIS NUMBER			
Tan Powder (Heroin)	2 pl6s	4,529				
Ton Powder (Heroin)	1 916	4,00g				
,						
	W 1994					
To be completed by ECU personnel only						
Name and Rank of Submitting Office	White	Date3-	269			
Received by	<u> no</u>		•			
		ECU Control #				

Date Analyzed: 3 ~ 21 ~ 11 City: Boston D.C.U. Police Dept. Officer: P.O. SYBIL WHITE Def:

Amount:

No. Cont: Cont: pb

Date Rec'd: 03/02/2011

Gross Wt.:

4.52

No. Analyzed: \

Net Weight: 0.12

Subst: SUB

# Tests: 2 1 0 0

Prelim:

Findings:

Folk\_OIG\_PRR\_044668

No. Date Analyzed: 3-31-1(
City: Boston D.C.U. Police Dept.

Officer: P.O. SYBIL WHITE

Def:

Amount: Subst: SUB

No. Cont: 1 Cont: pb

Date Rec'd: 03/02/2011: No. Analyzed:

Gross Wt.: 4.00 Net Weight: 0-12

# Tests: USS

Prelim: Henowh

Findings: Lerci ~

# DRUG POWDER ANALYSIS FORM

SAMPLE # AGENCY_	8084	<u>0</u> .	ANALYST	<i>650</i>
No. of samples tested:		Ev	rldence Wt.	
PHYSICAL DESCRIPTION:		Gros	s Wt( <u>/_</u> ):_	0.8564
Beige powered sus	840 B	Gros	s Wt ( \ ):_	0.4112
1 767			Pkg. Wt:_	·
			Net Wt:	0.1230
doubleagled	-			
		,		
•				
PRELIMINARY TESTS Spot Tests Cobalt		<u>Microcr</u> Gold	ystalline Tes	<u>ts</u>
Thiocyanate (+)		Chloride	-	
Marquis +		TLTA (	)	***************************************
Froehde's +		<u>HTO</u>	ER TESTS	,
Mecke's	*******			
		441044444999000000000000000000000000000		
PRELIMINARY TEST RESULTS		GC/MS CON	FIRMATORY	TEST
RESULTS Heroin		RESULTS_	•	
DATE 3-18-11		MS		
WATE	Of	PERATOR	PJ0	
		DATE	3-21-11	

# DRUG POWDER ANALYSIS FORM

SAMPLE# AGENCY	Boska Analyst	ASO
No. of samples tested:	Evidence Wt.	
PHYSICAL DESCRIPTION:	Gross Wt( );	0.3257
Being powdred sus	Gross Wt ( ):	
17 (85		
dontabagged	Net Wt:	0.1279
PRELIMINARY TESTS Spot Tests	Microcrystalline Tests	· <u>•</u>
Cobalt Thiocyanate ( +)	Gold Chloride	
Marquis	TLTA ( )	
Froehde's +	OTHER TESTS	
Mecke's		W-416-6
		у
PRELIMINARY TEST RESULTS	GC/MS CONFIRMATORY	<u>rest</u>
RESULTS HENON	RESULTS 14000	
DATE 3-18-11	MS OPERATOR P7P	·
	DATE 3-21-11	

Revised 7/2005

File Name :  $C:\msdchem\1\data\SYSTEM6\03_19_11\777604.D$ 

Operator : ASD

Date Acquired : 19 Mar 2011 14:57

1

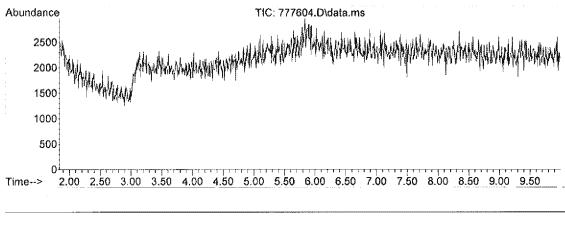
Sample Name : BLANK

Submitted by

Vial Number :

AcquisitionMeth: DRUGS.M

Integrator : RTE



Ret. Time

Area

Area %

Ratio %

\*\*\*NO INTEGRATED PEAKS\*\*\*

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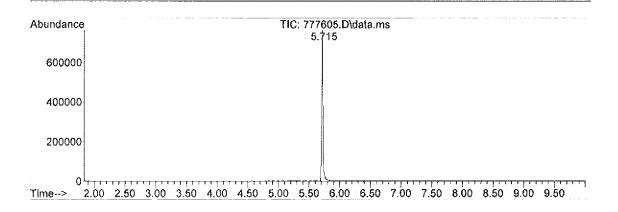
Operator : ASD

Date Acquired : 19 Mar 2011 15:10

Sample Name : HEROIN STD

Submitted by

Vial Number : 5
AcquisitionMeth: DRUGS.M
Integrator : RTE



Ret. Time	Area	Area %	Ratio %
5.715	1054093	100.00	100.00

File Name : C:\msdchem\1\data\SYSTEM6\03 19 11\777605.D

Operator : ASD

Date Acquired : 19 Mar 2011 15:10

Sample Name : HEROIN STD

Submitted by

Vial Number : 5 AcquisitionMeth: DRUGS.M Integrator : RTE

Search Libraries: C:\Database\SLI.L

C:\Database\SLI.L Minimum Quality: 80 C:\Database\NIST08.L Minimum Quality: 80

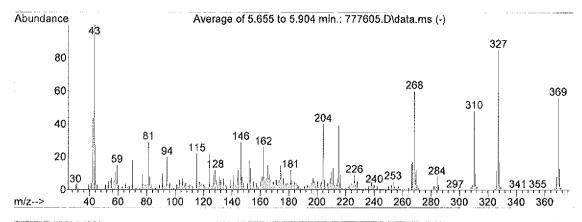
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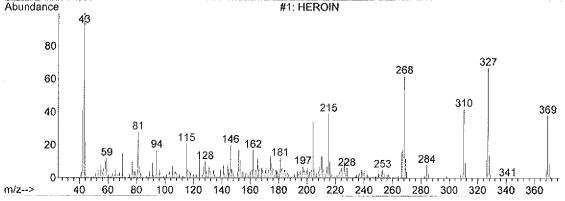
PK# RT Library/ID CAS# Qual

1 5.71 C:\Database\SLI.L

HEROIN

000561-27-3 99



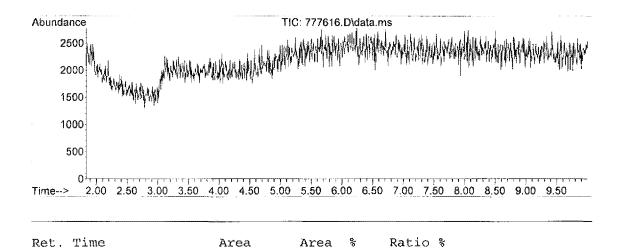


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Operator : ASD

Date Acquired : 19 Mar 2011 17:34

Sample Name : BLANK
Submitted by : ASD
Vial Number : 1
AcquisitionMeth: DRUGS.M
Integrator : RTE



\*\*\*NO INTEGRATED PEAKS\*\*\*

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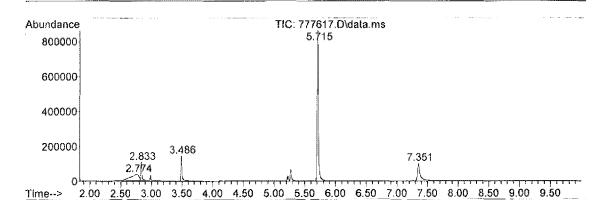
Operator : ASD

Date Acquired 19 Mar 2011 17:47

Sample Name Submitted by

: ASD Vial Number 17 AcquisitionMeth: DRUGS.M

Integrator : RTE



Ret. Time	Area	Area %	Ratio %	
2.774	317674	14.76	25.71	
2.833	121090	5.63	9.80	
3.486	173598	8.07	14.05	
5.715	1235420	57.41	100.00	
7.351	303987	14.13	24.61	

File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777617.D

Operator : ASD

Date Acquired : 19 Mar 2011 17:47

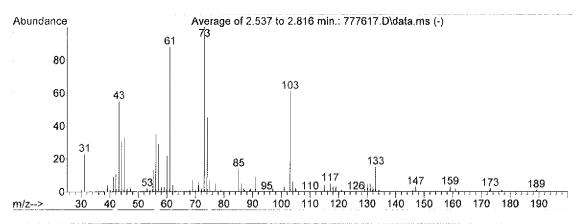
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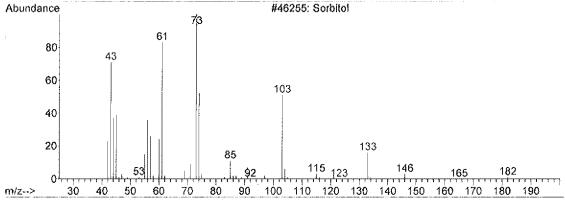
Submitted by : ASD
Vial Number : 17
AcquisitionMeth: DRUGS.M
Integrator : RTE

Search Libraries: C:\Database\SLI.L

C:\Database\SLI.L Minimum Quality: 80 C:\Database\NIST08.L Minimum Quality: 80

PK#	RT	Library/ID	CAS#	Qual
1	2,77	C:\Database\NIST08.L Sorbitol Sorbitol	000050-70-4 000050-70-4	91 91
		Glucitol	026566-34-7	91





File Name : C:\msdchem\1\data\SYSTEM6\03 19 11\777617.D

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Date Acquired : 19 Mar 2011 17:47

Sample Name Submitted by Vial Number

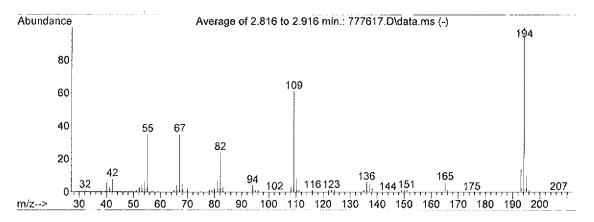
ASD

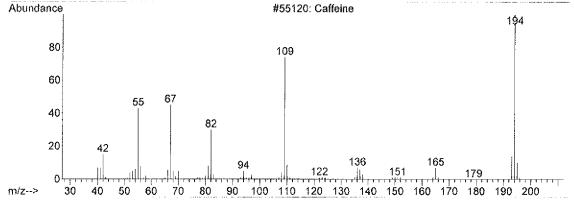
Vial Number : 17 AcquisitionMeth: DRUGS.M Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80

C:\Database\NIST08.L Minimum Quality: 80

PK#	RT	Library/ID	CAS#	Qual
2	2.83	C:\Database\NIST08.L		
		Caffeine	000058-08-2	97
		Caffeine	000058-08-2	95
		Caffeine	000058-08-2	94





File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777617.D

Operator : ASD

Date Acquired : 19 Mar 2011 17:47

Sample Name : Submitted by :

ASD 17

Vial Number : 17 AcquisitionMeth: DRUGS.M Integrator : RTE

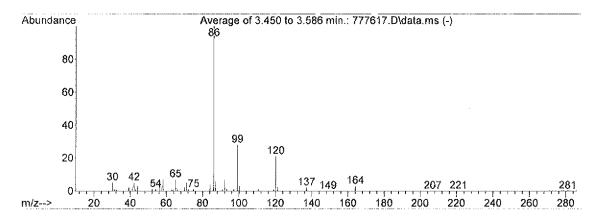
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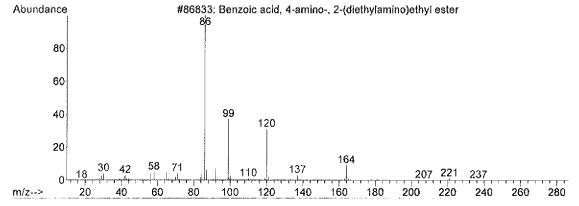
Minimum Quality: 80

C:\Database\NIST08.L

Minimum Quality: 80

PK#	RT	Library/ID	CAS#	Qual
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		Benzoic acid, 4-amino-, 2-(diethyla	000059-46-1	90
		Benzamide, 4-amino-N-[2-(diethylami	000051-06-9	90
		Renzamide 4-amino-N-12-/diethylami	000051-06-9	72





File Name : C:\msdchem\1\data\SYSTEM6\03 19 11\777617.D

Operator : ASD

Date Acquired : 19 Mar 2011 17:47

Sample Name : Submitted by :

RT

PK#

Submitted by : ASD
Vial Number : 17
AcquisitionMeth: DRUGS.M
Integrator : RTE

Search Libraries: C:\Database\SLI.L

Library/ID

HEROIN

Minimum Quality: 80

CAS#

C:\Database\NIST08.L

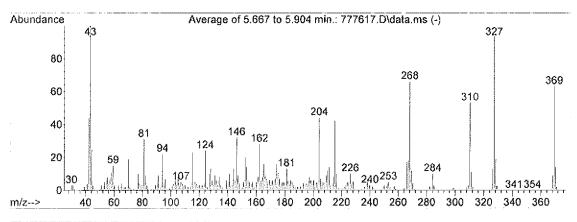
Minimum Quality: 80

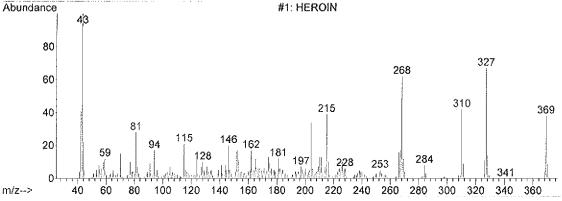
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4 5.71 C:\Database\SLI.L

000561-27-3 99

Qual





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Date Acquired 19 Mar 2011 17:47

Sample Name Submitted by

Vial Number

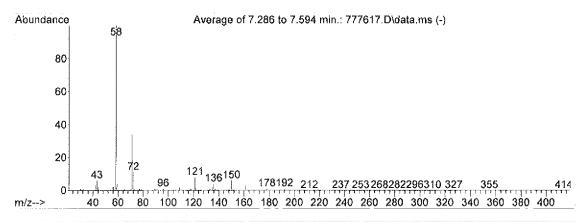
ASD 17 AcquisitionMeth: DRUGS.M

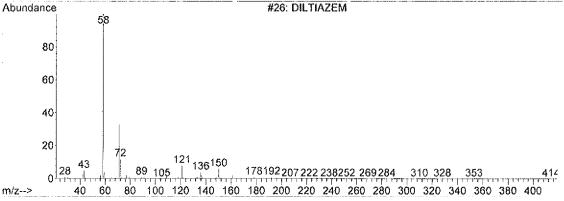
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80

C:\Database\NIST08.L Minimum Quality: 80

PK#	RT	Library/ID	CAS#	Qual
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		DILTIAZEM	033286-22-5	91
		CITALOPRAM	059729-33-8	4
		ORPHENADRINE	000083-98-7	2



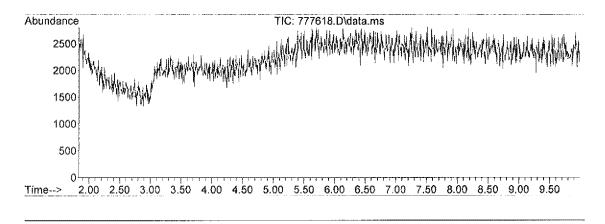


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Operator : ASD

Date Acquired : 19 Mar 2011 18:00

Sample Name : BLANK
Submitted by : ASD
Vial Number : 1
AcquisitionMeth: DRUGS.M
Integrator : RTE



Ret. Time Area Area % Ratio %

\*\*\*NO INTEGRATED PEAKS\*\*\*

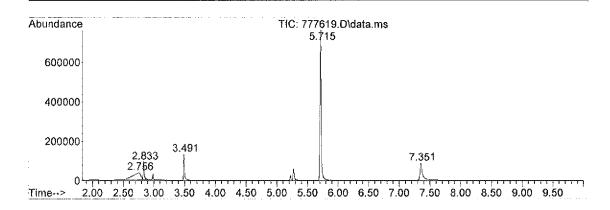
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Operator : ASD

Date Acquired : 19 Mar 2011 18:13

Sample Name :

Submitted by : ASD
Vial Number : 19
AcquisitionMeth: DRUGS.M
Integrator : RTE



Ret. Time	Area	Area %	Ratio %	
2.756	326942	16.66	29.84	
2.833	115843	5.90	10.57	
3.491	166536	8.49	15.20	
5.715	1095697	55.85	100.00	
7.351	256898	13.09	23,45	

File Name : C:\msdchem\1\data\SYSTEM6\03 19 11\777619.D

Operator : ASD

Date Acquired : 19 Mar 2011 18:13

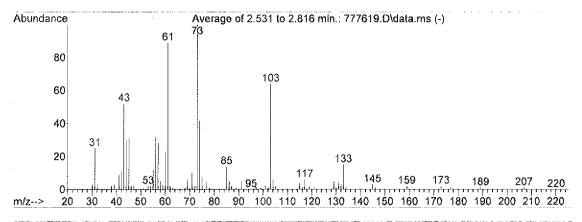
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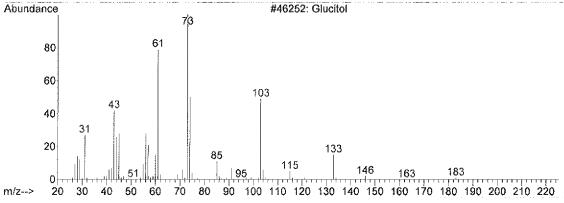
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Vial Number : 19
AcquisitionMeth: DRUGS.M
Integrator : RTE

Search Libraries: C:\Database\SLI.L

C:\Database\SLI.L Minimum Quality: 80 C:\Database\NIST08.L Minimum Quality: 80

PK#	RT	Library/ID	CAS#	Qual
1	2.76	C:\Database\NIST08.L	005555	
		Glucitol Sorbitol	026566-34-7 000050-70-4	90 87
		D-Mannitol	000069-65-8	86





File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777619.D

Operator : ASD

Date Acquired 19 Mar 2011 18:13

Sample Name Submitted by

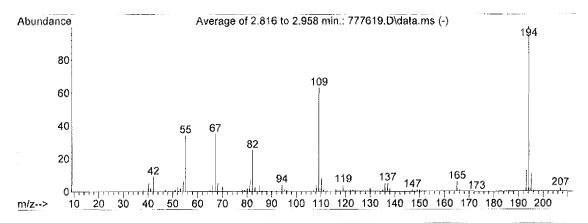
ASD 19

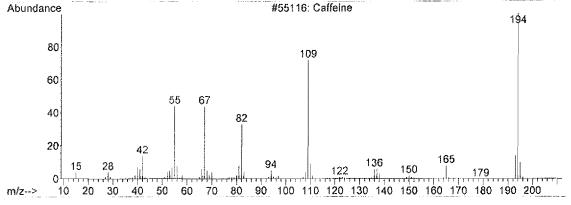
Vial Number AcquisitionMeth: DRUGS.M Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80 Minimum Quality: 80

C:\Database\NIST08.L

	PK#	RT	Library/ID	CAS#	Qual
2		2.83	C:\Database\NIST08.L Caffeine	000058-08-2	98
			Caffeine Caffeine	000058-08-2 000058-08-2	97 97





File Name : C:\msdchem\1\data\SYSTEM6\03 19 11\777619.D

Operator : ASD

Date Acquired : 19 Mar 2011 18:13

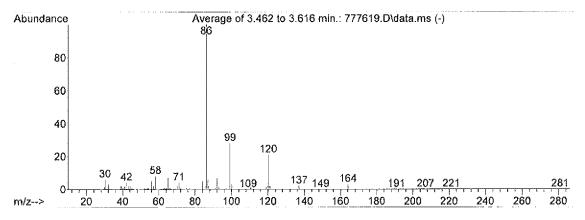
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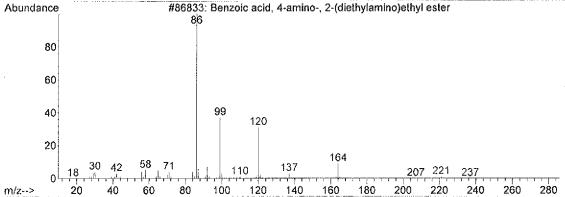
Submitted by : ASD
Vial Number : 19
AcquisitionMeth: DRUGS.M
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80

C:\Database\NIST08.L Minimum Quality: 80

PK#	RT	Library/ID	CAS#	Qual
3	3.49	C:\Database\NIST08.L		
		Benzoic acid, 4-amino-, 2-(diethyla	000059-46-1	90
		Benzamide, 4-amino-N-[2-(diethylami	000051-06-9	90
		Benzamide, 4-amino-N-[2-(diethylami	000051-06-9	64





File Name : C:\msdchem\1\data\SYSTEM6\03 19 11\777619.D

Operator : ASD

Date Acquired : 19 Mar 2011 18:13

JWH-073

Sample Name : Submitted by : ASD Vial Number : 19

AcquisitionMeth: DRUGS.M Integrator : RTE

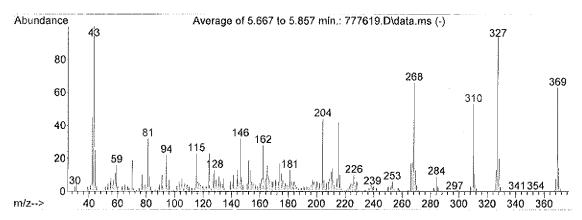
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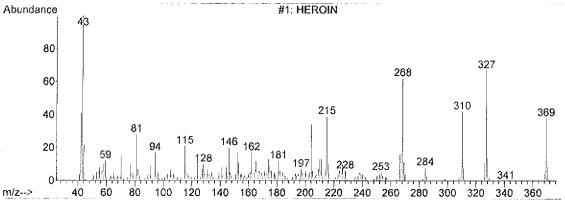
C:\Database\NIST08.L

C:\Database\PMW\_TOX2.L

PK# RT Library/ID CAS# Qual

4 5.71 C:\Database\SLI.L
HEROIN 000561-27-3 99





Minimum Quality: 80

208987-48-8

2

File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777619.D

Operator : ASD

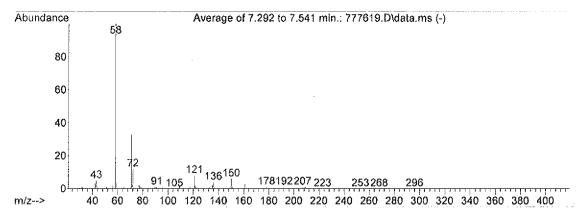
Date Acquired : 19 Mar 2011 18:13

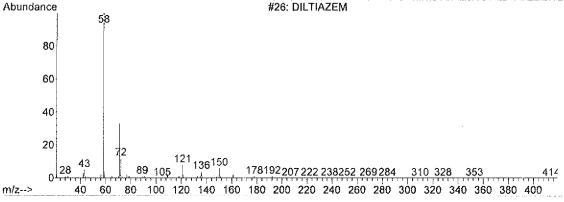
Sample Name :
Submitted by : ASD
Vial Number : 19
AcquisitionMeth: DRUGS.M
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80

C:\Database\NIST08.L Minimum Quality: 80

PK#	RT	Library/ID	CAS#	Qual
 5	7.35	C:\Database\SLI.L	000000	0.5
		DILTIAZEM	033286-22-5	91
		ORPHENADRINE	000083-98-7	2
		CITALOPRAM	059729-33-8	2



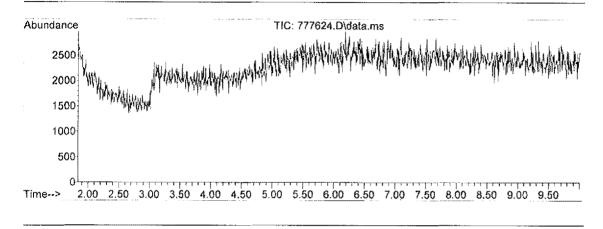


File Name : C:\msdchem\1\data\SYSTEM6\03\_19\_11\777624.D

Operator : ASD

Date Acquired : 19 Mar 2011 19:19

Sample Name : BLANK
Submitted by : ASD
Vial Number : 1
AcquisitionMeth: DRUGS.M
Integrator : RTE



Ret. Time Area Area % Ratio %

<sup>\*\*\*</sup>NO INTEGRATED PEAKS\*\*\*

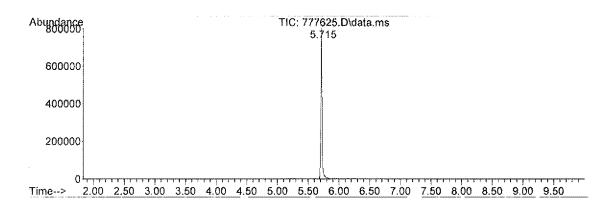
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Operator : ASD

Date Acquired : 19 Mar 2011 19:32

Sample Name : HEROIN STD

Submitted by : ASD Vial Number : 5 AcquisitionMeth: DRUGS.M Integrator : RTE



Ret. Time	Area	Area %	Ratio %
5.715	1119229	100.00	100.00

File Name : C:\msdchem\1\data\SYSTEM6\03 19 11\777625.D

Operator : ASD

Date Acquired 19 Mar 2011 19:32

Sample Name : HEROIN STD

Submitted by ASD Vial Number AcquisitionMeth: DRUGS.M Integrator : RTE

C:\Database\SLI.L Search Libraries: Minimum Quality: 80 Minimum Quality: 80

C:\Database\NIST08.L

C:\Database\PMW TOX2.L

Oual PK# RTLibrary/ID CAS#

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HEROIN

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